

Amendment and Response under 37 C.F.R. 1.116

Applicant: Xiang Dai et al.

Serial No.: 10/612,663

Filed: July 2, 2003

Docket No.: 200308566-1 (H300.211.101)

Title: SUPPORTING A CIRCUIT PACKAGE INCLUDING A SUBSTRATE HAVING A SOLDER COLUMN ARRAY

REMARKS

The following remarks are made in response to the Final Office Action mailed April 6, 2006. Claims 8, 10, 13-17, 20, 21, 23 and 25-29 were rejected. With this Response, claims 8, 10, 15, and 23-28 have been amended and claims 17 and 20 have been canceled. Claims 8, 10, 13-16, 21, 23 and 25-29 remain pending in the application and are presented for reconsideration and allowance.

Drawings Objection

In the Office Action, the drawings were objected to regarding "the body not in contact in the second assembled state". Although not identified in the Office Action, this rejection is apparently made in association with Applicant's independent claims 8 and 17.

Page 4 of Applicant's specification describes, in association with Figure 1, that each support 40 includes a pair of wing portions 42 and main body 44. Wing portions 42 extend outwardly from main body 44 and are generally perpendicular to each other. Wing portions 42 are sized and shaped to fit between lid 16 of package 14 and printed circuit board 12 and wing portions 42 support any load translated through lid 16 of package 14. However, main body 44 of support 40 is sized and shaped to receive a fastener.

Figures 1 and 2 clearly show wing portions 42 underneath lid 16, just as described in the specification, and clearly show that body 44 of support 40 is not underneath 16, and therefore not in contact with lid 16, just as described in the specification.

Contrary to the assertion in the Office Action that the "body is integral with the wings and is therefore mechanically in contact with the lid", two portions of a member (namely the body 44 and the wings 42) being connected to each other is not equivalent to them being co-located and does not necessitate them having the same function. As cited above, the specification specifically identifies a separate and distinct function/structure for the respective body 44 of support 40 and wings 42 of support 40. In particular, body 44 is shaped to extend outwardly away from lid 16 at a corner of package 14 to be positioned for the function of receiving a fastener to secure support 40 relative to printed circuit board 12. In contrast, wings 42 of support 40 are generally perpendicular to each other, being oriented in opposite direction from body 44 of support 40 for positioning wings 42 of support 40 underneath portions of lid 16 at a corner of package 14.

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As apparent from Figure 1, lid 16 does not overlap with body 44 as lid 16 does not even completely overlap the entire top surface of each wing 42, thereby further indicating that corner of lid 16 does not overlap body 44.

For these reasons, Applicant firmly believes that the drawings show more than adequate support for body 44 being not in contact with lid 16 in both the first initial state and the second final state of the assembled system. Accordingly, Applicant respectfully submits that the objection to the drawings be withdrawn.

Claim Rejections under 35 U.S.C. § 112

In the Office Action, claims 8, 10, 13-16, and 21-23 and 25-29 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Applicant's amended independent claim 8 is directed to an assembled electronic component system in which certain limitations (e.g., integrated circuit package) refer to a first, initial state of the assembled system and a second, final state of the assembled system. Accordingly, Applicant's claim specifies only one assembled system with the first initial state and the second final state referring to different states of the same assembled system. The first initial state corresponds to an earlier point in time in the assembled system and the second final state refers to a later point in time in the assembled system.

Contrary to the assertion in the Office Action, Applicant has not specified a first structure and a second structure. This assertion unfairly alters Applicant's claimed subject matter away from "the subject matter which Applicant regards as its invention", and Applicant respectfully requests withdrawal of this assertion.

Moreover, in Applicant's amended independent claim 8, Applicant identifies for a given component (e.g., the integrated circuit package or the compressive force mechanism) whether the claim limitations (e.g., integrated circuit package) are in reference to the first initial state or in reference to the second final state, or whether the claim limitations apply to both the first initial state and the second final state. For example, the limitations of the integrated circuit package apply to both a first initial state and a second final state of the assembled system. In another example, certain limitations of the wing portions of the support apply to the first initial state while other limitations of the wing portions of the support apply to the second final state of the assembled system.

For these reasons, Applicant believes that Applicant's amended independent claim 8 is definite and patentable over the art of record, as the Chuang Publication, the Wagner

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Patent, and other cited references do not teach or suggest Applicant's amended independent claim 8. Dependent claims 10, 13-14, 21, 23, and 25 are believed to be definite and patentable based on their dependency from patentably distinct independent claim 8, which is believed to be definite and patentable for the reasons previously presented.

Applicant's amended independent claim 15 is believed to be definite for substantially the same reasons presented for the definiteness of Applicant's amended independent claim 8 in that both independent claims 8 and 15 include the limitations of an assembled electronic component system and the limitations of a first initial state of the assembled system and a second final state of the assembled system. Accordingly, Applicant's amended independent claim 15 does not claim two different structures as asserted in the Office Action, and is therefore sets forth definite limitations of "the subject matter which Applicant regards as its invention" as one assembled system having a first state and a second state.

For these reasons, Applicant believes that Applicant's amended independent claim 8 is definite and patentable over the art of record, as the Chuang Publication, the Wagner Patent, and other cited references do not teach or suggest Applicant's amended independent claim 8. Dependent claims 16 and 26-27 are believed to be definite and patentable based on their dependency from patentably distinct independent claim 15, which is believed to be definite and patentable for the reasons previously presented.

Applicant's amended independent claim 28 is believed to be definite for substantially the same reasons presented for the definiteness of Applicant's amended independent claim 8 in that both independent claims 8 and 28 include the limitations of an assembled electronic component system and the limitations of a first initial state of the assembled system and a second final state of the assembled system. Accordingly, Applicant's amended independent claim 28 does not claim two different structures as asserted in the Office Action, and is therefore sets forth definite limitations of "the subject matter which Applicant regards as its invention" as one assembled system having a first state and a second state.

For these reasons, Applicant believes that Applicant's amended independent claim 28 is definite and patentable over the art of record, as the Chuang Publication, the Wagner Patent, and other cited references do not teach or suggest Applicant's amended independent claim 28. Dependent claim 29 is believed to be definite and patentable based on its dependency from patentably distinct independent claim 28, which is believed to be definite and patentable for the reasons previously presented.

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In light of the above, Applicant respectfully requests withdrawal of the rejection of claims 8, 10, 13-16, and 21-23 and 25-29 based on 35 U.S.C. §112.

Claim Rejections under 35 U.S.C. § 102

In the Office Action, claims 17 and 20 were rejected under 35 U.S.C. § 102(e) as being anticipated by Wagner et al. U.S. Publication No. 2002/0110335 (the Wagner Publication).

Applicant has canceled claims 17 and 20 without prejudice.

Claim Rejections under 35 U.S.C. § 103

In the Office Action, claims 17 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chuang et al. U.S. Publication No. 2004/0036162 (the Chuang Publication).

Applicant has canceled claims 17 and 20 without prejudice.

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CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 8, 10, 13-16, 21, 23 and 25-29 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 8, 10, 13-16, 21, 23 and 25-29 is respectfully requested.

No fees are required under 37 C.F.R. 1.16(h)(i). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 08-2025.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to either Paul S. Grunzweig at Telephone No. (612) 767-2504, Facsimile No. (612) 573-2005 or David A. Pleitner at Telephone No. (408) 447-3013, Facsimile No. (408) 447-0854. In addition, all correspondence should continue to be directed to the following address:

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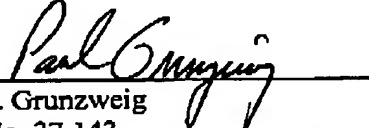
Respectfully submitted,

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CERTIFICATE UNDER 37 C.F.R. 1.8:

The undersigned hereby certifies that this paper or papers, as described herein, are being transmitted via facsimile to Facsimile No. (571) 273-8300 on this 30th day of June, 2006.

By: 

Name: Paul S. Grunzweig